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CENTRAL INTELLIGENCE AGENCY
INFORMATION REPORT

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COUNTRY USSR
SUBJECT Photosynthesis Research

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1. Most of the translations in the above list deal specifically with problems of photosynthesis, though there are some included which have a more general biochemical and chemical interest. Altogether they represent almost the total known publication of the USSR in the photosynthesis field.
2. The 87 articles vary in quality much more widely than similar articles in US scientific literature, because of differences in methods of publication. In the US, an article must represent very high standards of quality in scientific research before it will be accepted by a reputable journal. Also, if an article seems too unorthodox in its approach to a problem, it may be rejected. As a consequence, some very original thinking gets omitted from our best journals. In the USSR, however, it appears that everything ever submitted by a scientist gets published, regardless of quality or approach, with the exception of course of politically unacceptable material. The result is that Soviet scientific literature contains a great deal of worthless or mediocre material but it also includes some very original and refreshing ideas at the brilliant end of the scientific spectrum.
3. The articles listed above indicate that in most respects Soviet scientists working on photosynthesis lag somewhat behind their counterparts in the US. For example, in 1952, the Soviets were still publishing articles on how to synthesize radioactive compounds. In the US we were dealing with these techniques in about 1946, and have not published such articles for several years. One frequently finds the Soviets repeating within the last two or three years work which we were doing immediately after World War II or even in 1940, and which by now has been completely superseded. In spite of this,

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they refer to US work of rather recent date indicating that they receive and make use of the results of our research. [redacted]
 [redacted] their published work indicates that they are at least two years behind us in isotope work.

4. In work on the photochemistry of chlorophyll, however, USSR research is about on a par with that of the US. In some aspects it appears to be a little ahead, in others somewhat behind. As an example, they claim to have accomplished photochemical reduction of a co-enzyme I or II using ascorbic acid as the reducing agent and chlorophyll for photo-sensitising. This is an experiment which we in the US have tried and failed.
5. The most active workers in the photosynthesis field in the USSR appear to be the following:

PA KolesnikovAA KrasnovskiiAM Kuzin

EA Boichenko - This woman has been claiming for years accomplishments unknown in the US. I am inclined to think she is completely haywire.

NG Doman - Apparently quite young.

YB Evestigneef - Photochemical work.

6. Since 1952 Soviet work in photosynthesis has been increasing in both volume and quality. Their isotope work shows much improvement. Their photochemical work, however, was very good from the start.

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